IN THE CLAIMS

Claims 1 and 16 are amended. The claims are reproduced herein for the Examiner's convenience:

1. (CURRENTLY AMENDED) An apparatus for trimming the mass properties of a spacecraft, comprising:

a storage spool rotatably mounted on a first shaft, the first shaft being fixedly mounted on the spacecraft on a first side of a center of gravity of the apparatus;

an output spool rotatably mounted on a second shaft, the second shaft being fixedly mounted on the spacecraft on a second side of the center of gravity of the apparatus such that the first shaft, the center of gravity, and the second shaft are substantially colinear along a first line; and

a flexible material having a first end coupled to the storage spool and a second end coupled to the output spool, the flexible material traversing a second line, the second line being substantially perpendicular to the first line;

wherein a length of the flexible material is distributed between windings of the storage spool and the output spool to adjust mass properties of the spacecraft by changing the center of gravity of the apparatus.

2. (ORIGINAL) The apparatus of claim 1, wherein the flexible material has a direct path between storage spool and the output spool.

3. (ORIGINAL) The apparatus of claim 1, wherein the flexible material has an indirect path between storage spool and the output spool.

4. (ORIGINAL) The apparatus of claim 3, wherein the indirect path is formed by one or more guides.

5. (ORIGINAL) The apparatus of claim 1, wherein one or more guides support the flexible material.

6. (ORIGINAL) The apparatus of claim 1, wherein the storage spool is spring loaded to wind the flexible material onto the storage spool.

7. (ORIGINAL) The apparatus of claim 1, further comprising one or more latches to prevent the flexible material from disengaging the storage spool or the output spool.

8. (ORIGINAL) The apparatus of claim 1, wherein the flexible material comprises a metal ribbon.

9. (ORIGINAL) The apparatus of claim 8, wherein the metal ribbon comprises a spring, the spring loaded to wind onto the storage spool.

10. (ORIGINAL) The apparatus of claim 1, wherein the flexible material comprises a wire.

11. (ORIGINAL) The apparatus of claim 1, further comprising a motor assembly for winding the flexible material between the storage spool and the output spool.

12. (ORIGINAL) The apparatus of claim 11, wherein the motor assembly comprises a stepper motor.

13. (ORIGINAL) The apparatus of claim 11, wherein the motor assembly comprises a gearhead assembly.

14. (ORIGINAL) The apparatus of claim 11, wherein the storage spool is spring loaded to wind the flexible material onto the storage spool and the motor assembly is alternately controlled to allow the flexible material to wind onto the storage spool and to overcome the spring loading and wind the flexible material onto the output spool.

15. (ORIGINAL) The apparatus of claim 14, wherein the flexible material comprises a spring that spring loads the storage spool.

16. (CURRENTLY AMENDED) A method for trimming the mass properties of a spacecraft, comprising the steps of:

providing a storage spool rotatably mounted onto a first shaft fixedly mounted on the spacecraft on a first side of a center of gravity of an apparatus;

providing an output spool rotatably mounted onto a second shaft fixedly mounted on the spacecraft on a second side of the center of gravity of the apparatus such that the first shaft, the center of gravity, and the second shaft are substantially colinear along a first line;

coupling a first end of a flexible material to the storage spool;

coupling a second end coupled of the flexible material to the output spool such that the flexible material traverses a second line, the second line being perpendicular to the first line; and

distributing a length of the flexible material between windings of the storage spool and the output spool to adjust mass properties of the spacecraft by changing the center of gravity of the apparatus.

17. (ORIGINAL) The method of claim 16, wherein the flexible material has a direct path between storage spool and the output spool.

18. (ORIGINAL) The method of claim 16, wherein the flexible material has an indirect path between storage spool and the output spool.

19. (ORIGINAL) The method of claim 18, wherein the indirect path is formed by one or more guides.

20. (ORIGINAL) The method of claim 16, further comprising supporting the flexible material with one or more guides.

21. (ORIGINAL) The method of claim 16, wherein the storage spool is spring loaded to wind the flexible material onto the storage spool.

22. (ORIGINAL) The method of claim 16, wherein one or more latches prevent the flexible material from disengaging the storage spool or the output spool.

23. (ORIGINAL) The method of claim 16, wherein the flexible material comprises a metal ribbon.

24. (ORIGINAL) The method of claim 23, wherein the metal ribbon comprises a spring, the spring loaded to wind onto the storage spool.

25. (ORIGINAL) The method of claim 16, wherein the flexible material comprises a wire.

26. (ORIGINAL) The method of claim 16, further comprising a motor assembly for winding the flexible material between the storage spool and the output spool.

27. (ORIGINAL) The method of claim 26, wherein the motor assembly comprises a stepper motor.

28. (ORIGINAL) The method of claim 26, wherein the motor assembly comprises a gearhead assembly.

29. (ORIGINAL) The method of claim 26, wherein the storage spool is spring loaded to wind the flexible material onto the storage spool and the motor assembly is alternately controlled to allow the flexible material to wind onto the storage spool and to overcome the spring loading and wind the flexible material onto the output spool.

30. (ORIGINAL) The method of claim 29, wherein the flexible material comprises a spring that spring loads the storage spool.